

Abdominal Pain

Summary from Rosen's By Kevan Beth Meadors

Epidemiology

- Accounts for 10% of all ED visits, and <40% receive the diagnosis of nonspecific abdominal pain
- Elderly patients (>65yo), immunocompromised patients and women of reproductive age deserve special consideration
- Immunocompromised patients are often worked up in the ED and require a broad differential diagnosis due to misleading labs and highly variable presentations

Pathophysiology

- Most common sources of pain perceived are the GI and GU tracts
- Pain derived from one of three distinct pain pathways: visceral, somatic, referred
 - Visceral: results from autonomic nerve stimulation, usually earliest manifestation of disease, poorly characterized and hard to localize
 - Somatic: occurs with irritation of the parietal peritoneum; usually caused by infection, chemical irritation or other inflammatory processes; conducted by peripheral nerves; better localization than visceral pain; often intense and constant
 - Referred: pain felt at a distance from its source, makes localization difficult, both visceral and somatic can manifest as referred

Differential Diagnosis

- Intraabdominopelvic causes (intraperitoneal, retroperitoneal, pelvic)—ex: appendicitis, cholecystitis, pancreatitis
- Extraabdominopelvic causes—ex: pneumonia, MI, ketoacidosis, toxicologic
- RUQ Pain
 - Biliary colic
 - Cholecystitis
 - Gastritis
 - GERD
 - Hepatic Abscess
 - Acute Hepatitis
 - Hepatomegaly (due to CHF)
 - Perforated Ulcer
 - Pancreatitis
 - Retrocecal Appendicitis
 - Myocardial Ischemia
 - Appendicitis in pregnancy
 - RLL Pneumonia
- RLQ Pain
 - Appendicitis
 - Meckel's Diverticulitis
 - Cecal Diverticulitis
 - Aortic Aneurysm
 - Ectopic Pregnancy
 - Ovarian Cyst
 - PID
- Diffuse Pain
 - Peritonitis
 - Pancreatitis
 - Sickle Cell Crisis
 - Early Appendicitis
 - Mesenteric Thrombosis
 - Gastroenteritis
 - Dissecting or ruptured Aneurysm
 - Intestinal Obstruction
 - Diabetes Mellitus
 - IBD
 - Irritable Bowel
- LUQ Pain
 - Gastritis
- Endometriosis
- Ureteral Calculi
- Psoas Abscess
- Mesenteric Adenitis
- Incarcerated/Strangulated Hernia
- Ovarian Torsion
- Tubo-ovarian Abscess
- UTI
- Pancreatitis
- GERD
- Splenic Pathology
- Myocardial Ischemia
- Pericarditis
- Myocarditis
- LLL Pneumonia
- Pleural Effusion
- LLQ Pain
 - Aortic Aneurysm
 - Sigmoid Diverticulitis
 - Incarcerated/Strangulated Hernia
 - Ectopic Pregnancy
 - Ovarian Torsion
 - Mittelschmerz
 - Ovarian Cyst
 - PID
 - Endometriosis
 - Tubo-ovarian Abscess
 - Ureteral Calculi
 - Psoas Abscess
 - UTI

Signs and Symptoms

- Perform a focused history, asking high yield questions
- Abrupt onset usually represents a more serious case

- Bowel Obstruction—diffuse, severe, colicky
- Mesenteric Ischemia—“pain out of proportion to exam”
- Pancreatitis—pain radiating from epigastrium straight through to midback
- Splenic pathology, Diaphragmatic irritation, or Free intraperitoneal fluid—pain radiating to left shoulder
- Perforated gastric/duodenal ulcer, ruptured aortic aneurysm or ectopic pregnancy—pain associated with syncope
- Thorough review of PMH is key, including medications that can be causing current disease state (immunosuppressive, anticoagulation, anti-inflammatory, narcotics)

Work-up

- Measure vital signs, although interpret in context of entire presentation because they can sometimes be misleading
- Perform a thorough abdominal exam with patient supine and abdomen exposed
- Consider rectal exam if concerned for gastrointestinal hemorrhage, prostatitis or perirectal disease
- Perform a pelvic exam in females with lower abdominal pain and a GU exam in males
- Choose a pelvic ultrasound to evaluate uterine and ovarian pathology and a CT for intra-abdominal pathology
- Exams may be repetitive, especially when presentations are atypical
- UA and UPT testing are time- and cost-effective; CBCs are frequently ordered but rarely helpful for a diagnosis
- Plain radiography is only useful if bowel obstruction or foreign body is suspected
- CT is used often in elderly patients and is the imaging modality of choice with nonobstetric, nonbiliary abdominal pain
- Bedside transabdominal/transvaginal ultrasounds are useful to identify intrauterine pregnancy or diagnose non-life-threatening conditions such as gallstones

Empiric Management

- Main goals: physiologic stabilization, control of symptoms and expeditious diagnosis with or without consultation
- Analgesics, antacids, anticholinergics, antiemetics, NGT suctioning or broad-spectrum antibiotics are given according to symptoms and suspected disease process

Disposition

- Surgical vs. Nonsurgical consultation and management
- Admission for observation (using information gained from H&P, test results, suspected disease, likelihood of follow-up after discharge, patient’s ability to return if symptoms worsen)
- Discharge if clinically stable with appropriate follow-up care arranged and following criteria met:
 - No serious organ pathology or peritoneal irritation suspected
 - Normal or near-normal vitals signs
 - Pain and nausea controlled
 - Patient can take fluids by mouth
 - Patient informed about what to do if circumstances change after discharge